

# SEQUENCE LISTING

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<120> HUMANIZED ANTIBODIES THAT RECOGNIZE VEROTOXIN II AND  
CELL LINE PRODUCING SAME

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<141> 2000-11-17

<150> WO 99/59629  
<151> 1999-05-19

<150> US 60/086,570  
<151> 1998-05-20

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<170> PatentIn Ver. 2.1

<210> 1  
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<212> DNA  
<213> Mus musculus

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<221> CDS  
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<223> Figure 1(A): Heavy chain variable region of mouse  
antibody VTm1.1 (MuVTm1.1).

<400> 1  
atg aac ttt gtg ctc agc tcg att ttc ctt gcc ctc att tta aaa gga 48  
Met Asn Phe Val Leu Ser Ser Ile Phe Leu Ala Leu Ile Leu Lys Gly  
1 5 10 15

gtc cag tgt gaa gtg cag ctg gtg gag tcg ggg gga ggc tta gtg aag 96  
Val Gln Cys Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys  
20 25 30

cct gga ggg ccc ctg aaa ctc tcc tgt gca gcc tct gga ttc act ttc 144  
Pro Gly Gly Pro Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe  
35 40 45

agt agt tat ggc atg tct tgg gtt cgc cag act ccg gag aag agg ctg 192  
Ser Ser Tyr Gly Met Ser Trp Val Arg Gln Thr Pro Glu Lys Arg Leu  
50 55 60

gag tgg gtc gca acc att agt act ggt ggt agt tac acc tac tac cca 240  
Glu Trp Val Ala Thr Ile Ser Thr Gly Gly Ser Tyr Thr Tyr Tyr Pro  
65 70 75 80

gac agt gtg aag ggt cga ttc acc atc tcc aga gac aat gcc aag aac 288  
 Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn  
                     85                    90                    95

gcc ctg tat ctg caa atg agc agt ctg agg tct gag gac acg gcc ata 336  
 Ala Leu Tyr Leu Gln Met Ser Ser Leu Arg Ser Glu Asp Thr Ala Ile  
                     100                    105                    110

tat tac tgt gca aga cgg ggg gac gca tgg ggt aac ttg gac tac tgg 384  
 Tyr Tyr Cys Ala Arg Arg Gly Asp Ala Trp Gly Asn Leu Asp Tyr Trp  
                     115                    120                    125

ggt caa gga acc tct gtc acc gtc tcc tca 414  
 Gly Gln Gly Thr Ser Val Thr Val Ser Ser  
                     130                    135

<210> 2

<211> 138

<212> PRT

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<220>

<223> Figure 1(A): Heavy chain variable region of mouse  
 antibody VTm1.1 (MuVTm1.1).

<400> 2

Met Asn Phe Val Leu Ser Ser Ile Phe Leu Ala Leu Ile Leu Lys Gly  
           1                    5                    10                    15

Val Gln Cys Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys  
                     20                    25                    30

Pro Gly Gly Pro Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe  
                     35                    40                    45

Ser Ser Tyr Gly Met Ser Trp Val Arg Gln Thr Pro Glu Lys Arg Leu  
           50                    55                    60

Glu Trp Val Ala Thr Ile Ser Thr Gly Gly Ser Tyr Thr Tyr Tyr Pro  
           65                    70                    75                    80

Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn  
                     85                    90                    95

Ala Leu Tyr Leu Gln Met Ser Ser Leu Arg Ser Glu Asp Thr Ala Ile  
                     100                    105                    110

Tyr Tyr Cys Ala Arg Arg Gly Asp Ala Trp Gly Asn Leu Asp Tyr Trp  
                     115                    120                    125

Gly Gln Gly Thr Ser Val Thr Val Ser Ser  
           130                    135

<210> 3

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<212> DNA

<213> Mus musculus

<220>  
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<220>  
 <223> Figure 1(B): Light chain variable region of mouse  
 VTm1.1 antibody (MuVTm1.1).

<400> 3  
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 Met Val Phe Thr Pro Gln Ile Leu Gly Leu Met Leu Phe Trp Ile Ser  
 1 5 10 15  
 gcc tcc aga ggt gat gtt gtg cta act cag tct cca gcc acc ctg tct 96  
 Ala Ser Arg Gly Asp Val Val Leu Thr Gln Ser Pro Ala Thr Leu Ser  
 20 25 30  
 gtg act cca gga gat agc gtc agt ctt tcc tgc agg gcc agt caa act 144  
 Val Thr Pro Gly Asp Ser Val Ser Leu Ser Cys Arg Ala Ser Gln Thr  
 35 40 45  
 att agc aac aac cta cac tgg tat caa cac aaa tca cat gag tct cca 192  
 Ile Ser Asn Asn Leu His Trp Tyr Gln His Lys Ser His Glu Ser Pro  
 50 55 60  
 agg ctt ctc atc aag tct gct tcc cag tcc atc tct ggg atc ccc tcc 240  
 Arg Leu Leu Ile Lys Ser Ala Ser Gln Ser Ile Ser Gly Ile Pro Ser  
 65 70 75 80  
 agg ttc agt ggc agt gga tca ggg aca gat ttc act ctc agt atc aac 288  
 Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Ser Ile Asn  
 85 90 95  
 agt gtg gaa act gaa gat ttt gga atg tat ttc tgt caa cag agt tac 336  
 Ser Val Glu Thr Glu Asp Phe Gly Met Tyr Phe Cys Gln Gln Ser Tyr  
 100 105 110  
 agc tgg ccg ctc acg ttc ggt gct ggg acc aag ctg gag ctg aaa 381  
 Ser Trp Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys  
 115 120 125

<210> 4  
 <211> 127  
 <212> PRT  
 <213> Mus musculus

<220>  
 <223> Figure 1(B): Light chain variable region of mouse  
 VTm1.1 antibody (MuVTm1.1).

<400> 4  
 Met Val Phe Thr Pro Gln Ile Leu Gly Leu Met Leu Phe Trp Ile Ser  
 1 5 10 15  
 Ala Ser Arg Gly Asp Val Val Leu Thr Gln Ser Pro Ala Thr Leu Ser  
 20 25 30  
 Val Thr Pro Gly Asp Ser Val Ser Leu Ser Cys Arg Ala Ser Gln Thr  
 35 40 45



Tyr Tyr Cys Ala Arg Arg Gly Asp Ala Trp Gly Asn Leu Asp Tyr Trp  
 115 120 125

ggt caa gga acc tta gtc acc gtc tcc tca  
 Gly Gln Gly Thr Leu Val Thr Val Ser Ser  
 130 135

414

<210> 6  
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 <212> PRT  
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<220>  
 <223> Figure 2(A): Heavy chain variable region of  
 humanized VTm1.1 antibody (HuVTm1.1).

<400> 6  
 Met Asn Phe Val Leu Ser Ser Ile Phe Leu Ala Leu Ile Leu Lys Gly  
 1 5 10 15  
 Val Gln Cys Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln  
 20 25 30  
 Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe  
 35 40 45  
 Ser Ser Tyr Gly Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu  
 50 55 60  
 Glu Trp Val Ala Thr Ile Ser Thr Gly Gly Ser Tyr Thr Tyr Tyr Pro  
 65 70 75 80  
 Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn  
 85 90 95  
 Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val  
 100 105 110  
 Tyr Tyr Cys Ala Arg Arg Gly Asp Ala Trp Gly Asn Leu Asp Tyr Trp  
 115 120 125  
 Gly Gln Gly Thr Leu Val Thr Val Ser Ser  
 130 135

<210> 7  
 <211> 381  
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<220>  
 <221> CDS  
 <222> (1)..(381)  
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 <223> igure 2(B): Light chain variable region of  
 humanized VTm1.1 antibody (HuVTm1.1) .

<400> 7

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atg gtt ttc aca cct cag ata ctt gga ctt atg ctt ttt tgg att tca 48
Met Val Phe Thr Pro Gln Ile Leu Gly Leu Met Leu Phe Trp Ile Ser
  1           5           10           15

gcc tcc aga ggt gaa att gtg cta act cag tct cca gcc acc ctg tct 96
Ala Ser Arg Gly Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser
           20           25           30

gtg tct cca gga gaa aga gcc act ctt tcc tgc agg gcc agt caa act 144
Val Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Thr
           35           40           45

att agc aac aac cta cac tgg tat caa caa aaa cca ggt cag gct cca 192
Ile Ser Asn Asn Leu His Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro
           50           55           60

agg ctt ctc atc aag tct gct tcc cag tcc atc tct ggg ata ccc gcc 240
Arg Leu Leu Ile Lys Ser Ala Ser Gln Ser Ile Ser Gly Ile Pro Ala
        65           70           75           80

agg ttc agt ggc agt gga tca ggg aca gat ttc act ctc act atc agc 288
Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
           85           90           95

agt ctg gaa tct gaa gat ttt gca gtg tat tac tgt caa cag agt tac 336
Ser Leu Glu Ser Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Ser Tyr
           100           105           110

agt tgg ccg ctc acg ttc ggt caa ggg acc aag gtg gag atc aaa 381
Ser Trp Pro Leu Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
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<210> 8

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<223> Figure 2(B): Light chain variable region of  
humanized VTm1.1 antibody (HuVTm1.1) .

<400> 8

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Met Val Phe Thr Pro Gln Ile Leu Gly Leu Met Leu Phe Trp Ile Ser
  1           5           10           15

Ala Ser Arg Gly Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser
        20           25           30

Val Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Thr
        35           40           45

Ile Ser Asn Asn Leu His Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro
        50           55           60

Arg Leu Leu Ile Lys Ser Ala Ser Gln Ser Ile Ser Gly Ile Pro Ala
        65           70           75           80

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
        85           90           95

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Ser Leu Glu Ser Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Ser Tyr  
100 105 110

Ser Trp Pro Leu Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys  
115 120 125

<210> 9  
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<213> Homo sapiens

<220>  
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Glu Val Gln Val Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly  
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Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Lys Tyr  
20 25 30  
Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
35 40 45  
Ser Gly Ile Ser Ala Ser Gly Glu Asn Thr Tyr Tyr Ala Asp Pro Val  
50 55 60  
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Val Tyr  
65 70 75 80  
Leu Gln Met Asn Ser Leu Arg Ala Asp Asp Thr Ala Met Tyr Tyr Cys  
85 90 95  
Ala Lys Gly Gly Arg Gln Trp Val Val Leu Gly Tyr Phe Phe Asp Ser  
100 105 110  
Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser  
115 120

<210> 10  
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<212> PRT  
<213> Homo sapiens

<220>  
<223> light chain variable region of the GF4/1.1 antibody

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Glu Arg Val Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Asn  
20 25 30  
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile  
35 40 45  
Tyr Gly Ala Ser Thr Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly  
50 55 60  
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Asn Ser Leu Gln Ser  
65 70 75 80  
Glu Asp Phe Ala Leu Tyr Tyr Cys His Glu Tyr Asn Gly Trp Pro Pro  
85 90 95  
Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Thr  
100 105 110